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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,309

09/18/2006

Jun Cheng

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12/15/2008

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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT

PAPER NUMBER

2419

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,309	Applicant(s) CHENG ET AL.	
	Examiner Andrew C. Lee	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/18/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action in response to the Application no. 10593309 filed on 9/18/2008 is entered.

Claims 1 and 2 are hence entered and presented for examination.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 9/18/2008 was filed, and the submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US 20030133415 A1).

Regarding claim 1, Kim et al. discloses a packet data scheduling method used in a radio communication apparatus transmitting packet data to a plurality of communicating parties using a plurality of subchannels (Abstract, Fig. 5, para. {0050}),

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the method comprising: a first step of setting a total transmission rate for the plurality of communicating parties (Fig. 1, para. [0030]); a second step of calculating a traffic amount for each of the plurality of communicating parties in accordance with the total transmission rate and a weighting factor assigned to each of the plurality of communicating parties (para. [0037], [0038], Fig. 2A, Fig. 2B); a third step of assigning the plurality of subchannels to the plurality of communicating parties in accordance with channel quality up to upper limits of the traffic amounts (para. [0039]); a fourth step of calculating a transmission rate for a subchannel that is not assigned to any of the plurality of communicating parties in the third step among the plurality of subchannels (Fig. 4A, Fig. 4B, para. [0047]-[0048]); and a fifth step of updating the total transmission rate using the transmission rate calculated in the fourth step, wherein the second step, the third step, the fourth step and the fifth step are performed repeatedly until the number of subchannels that are not assigned to any of the plurality of communicating parties in the third step is equal to or less than a threshold (Fig. 3, Fig. 5, para. [0050] – [0055]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 7155236 B2) in view of Kim et al. (20030133415 A1).

Regarding claim 2, Chen et al. disclose a radio communication apparatus that transmits packet data to a plurality of communicating parties using a plurality of subchannels, the apparatus comprising: a scheduler that performs scheduling for the packet data (Abstract, “scheduler”; Fig. 2, col. 7, lines 44 – 48), the scheduling comprising: a first step of setting a total transmission rate for the plurality of communicating parties (“maximum allowed transmission rate”; col. 17, lines 4 – 13);

Although Chen et al. disclose implicitly a second step of calculating a traffic amount for each of the plurality of communicating parties in accordance with the total transmission rate and a weighting factor assigned to each of the plurality of communicating parties (Fig. 6, col. 26, lines 29 – 60)

Chen et al. do not disclose explicitly a second step of calculating a traffic amount for each of the plurality of communicating parties in accordance with the total transmission rate and a weighting factor assigned to each of the plurality of communicating parties ; a third step of assigning the plurality of subchannels to the plurality of communicating parties in accordance with channel quality up to upper limits of the traffic amounts; a fourth step of calculating a transmission rate for a subchannel that is not assigned to any of the plurality of communicating parties in the third step among the plurality of subchannels; and a fifth step of updating the total transmission rate using the transmission rate calculated in the fourth step; and an assignment section that assigns the packet data to the plurality of subchannels according to the scheduling,

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wherein the scheduler performs the second step, the third step, the fourth step and the fifth step repeatedly until the number of subchannels that are not assigned to any of the plurality of communicating parties in the third step is equal to or less than a threshold.

However, Kim et al. in the same field of endeavor teach a second step of calculating a traffic amount for each of the plurality of communicating parties in accordance with the total transmission rate and a weighting factor assigned to each of the plurality of communicating parties (para. [0037], [0038], Fig. 2A, Fig. 2B); a third step of assigning the plurality of subchannels to the plurality of communicating parties in accordance with channel quality up to upper limits of the traffic amounts (para. [0039]); a fourth step of calculating a transmission rate for a subchannel that is not assigned to any of the plurality of communicating parties in the third step among the plurality of subchannels (Fig. 4A, Fig. 4B, para. [0047]-[0048]); and a fifth step of updating the total transmission rate using the transmission rate calculated in the fourth step; and an assignment section that assigns the packet data to the plurality of subchannels according to the scheduling, wherein the scheduler performs the second step, the third step, the fourth step and the fifth step repeatedly until the number of subchannels that are not assigned to any of the plurality of communicating parties in the third step is equal to or less than a threshold (Fig. 3, Fig. 5, para. [0050] – [0055]).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Chen et al. to include the features of a second step of calculating a traffic amount for each of the plurality of communicating parties in accordance with the total transmission rate and a weighting factor assigned to

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each of the plurality of communicating parties; a third step of assigning the plurality of subchannels to the plurality of communicating parties in accordance with channel quality up to upper limits of the traffic amounts; a fourth step of calculating a transmission rate for a subchannel that is not assigned to any of the plurality of communicating parties in the third step among the plurality of subchannels; and a fifth step of updating the total transmission rate using the transmission rate calculated in the fourth step; and an assignment section that assigns the packet data to the plurality of subchannels according to the scheduling, wherein the scheduler performs the second step, the third step, the fourth step and the fifth step repeatedly until the number of subchannels that are not assigned to any of the plurality of communicating parties in the third step is equal to or less than a threshold as taught by Kim et al. One of ordinary skill in the art would be motivated to do so for providing a system and method of controlling the assignment of a call on a R-SHC in a CDMA mobile communication system (as suggested by Kim et al., see para. [0013]).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571)272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2419
<12/06/2008:1Qy09>

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2419